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EXAMINER

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ART UNIT PAPER NUMBER

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13

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Paper No. 13

Application Number: 09/862,910
Filing Date: May 22, 2001
Appellant(s): JONES, JAMES LARRY

William S. Gottschalk
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed March 31, 2003.

(1) *Real Party in Interest*

A statement identifying the real party in interest is contained in the brief.

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(2) *Related Appeals and Interferences*

A statement identifying there are no related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is incorrect. A correct statement of the status of the claims is as follows:

This appeal involves claims 7, 9-10 and 13.

Claims 1, 3-6 and 8 are withdrawn from consideration as not directed to the elected species.

Claims 2 and 11-12 have been canceled.

(4) *Status of Amendments After Final*

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct.

(6) *Issues*

The appellant's statement of the issues in the brief is substantially correct. The changes are as follows:

Whether claim 10 is unpatentable under 35 USC 103(a) over Appellant's Prior Art Figure 1 in view of Litton.

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Whether claims 7, 9 and 13 are unpatentable under 35 USC 103(a) over Appellant's Prior Art Figure 1 in view of Litton, and further in view of Schade, Jr.

(7) *Grouping of Claims*

Appellant's brief includes a statement that claims 7 and 9-10 stand or fall together as a group and claim 13 stands by itself and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

(8) *Claims Appealed*

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) *Prior Art of Record*

2,362,911

LITTON

11-1944

(10) *Grounds of Rejection*

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Appellant's Prior Art Figure 1 in view of Litton.

Appellant's Prior Art Figure 1 (specification, page 1) discloses a generator or electromechanical device 10 cooled by a fluid conduit or chamber 14 defined by a housing 12

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around the generator or electromechanical device 10 and external wall 13 secured to the housing 12, but does not disclose a helical cooling coil.

Litton discloses a heat exchanger (Figure 3) comprising a heat source 31 and a helical cooling coil 34 for the purpose of providing improved heat transfer.

Since Appellant's Prior Art Figure 1 and Litton are both from the same field of endeavor and/or analogous art, the purpose disclosed by Litton would have been recognized in the pertinent art of Appellant's Prior Art Figure 1.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Appellant's Prior Art Figure 1 a helical cooling coil for the purpose of providing improved heat transfer as recognized by Litton. Clearly, the helical cooling coil 34 is an alternate of the cooling jacket 14 in Figure 1 of Litton, similar to Appellant's Prior Art Figure 1.

Claims 7, 9 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Appellant's Prior Art Figure 1 in view of Litton as applied to claim 10 above, and further in view of Schade, Jr.

The combined teachings of Appellant's Prior Art Figure 1 and Litton lacks mechanically fastening the helical coil.

Schade, Jr. discloses a heat exchanger comprising a heat source 10 and a helical cooling coil 17 mechanically fastened thereto for the purpose of improving structural contact and heat transfer.

Since Appellant's Prior Art Figure 1 and Schade, Jr. are both from the same field of endeavor and/or analogous art, the purpose disclosed by Schade, Jr. would have been recognized in the pertinent art of Appellant's Prior Art Figure 1.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Appellant's Prior Art Figure 1 mechanically fastening the helical cooling coil for the purpose of improving structural contact and heat transfer as recognized by Schade, Jr.

Regarding claim 13, Schade, Jr. (column 2, lines 30-31) the helical cooling coil can be soldered, which forms a brazed joint.

(11) Response to Argument

The Examiner agrees there is no motivation in the Appellant's Prior Art Figure 1 to combine what is taught in the secondary reference of Litton. If such were the case, then the rejection of claim 10 would be anticipatory not obviousness. Appellant's remarks are not commensurate in scope with the claims. The instant invention as claimed does not recite stainless steel as a housing material, nor its thickness. The Examiner is unaware of any instance where improved heat transfer is an unwanted condition, especially when appellant's specification states, "The magnetic field member and/or the windings produces an undesirable level of heat."

In response to appellant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5

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USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the secondary reference of Litton clearly teaches one of ordinary skill in the art to employ a helical cooling coil for the purpose of providing improved heat transfer. Improved heat transfer is provided when the residence time of the fluid in the cooling coil is increased, rather the cooling fluid path is increased.

The examiner disagrees with appellant's interpretation of Litton. The secondary reference of Litton discloses additional heat generating structure with corresponding function. However, Litton discloses a cooling coil 34 in Figure 3 to cool a heat generating device disposed concentrically therein. Furthermore, as noted above, the helical cooling coil 34 is an alternate of the cooling jacket 14 in Figure 1 of Litton, which is similar to Appellant's Prior Art Figure 1. As shown in cross section of Figures 3 and 1, Figures 4 and 2 respectively show the cooling coil 34 is can be employed in place of cooling chamber 14. The heat generating structures disposed within the confines of the cooling structures do not change, only the cooling structures. As demonstrated by the cited prior art of record, cooling coils disposed around central heat generating structures are well known in the art.

With respect to the rejection of claim 13 is based on the combined teachings of Appellant's Prior Art Figure 1 and Litton, further in view of Schade, Jr., appellant's specification (page 4, line 6) discloses "the cooling coils 26 *may be brazed* to the wall portion 16 (emphasis added)." As such, brazing is believed to be nothing more than a mere preference, where the brazing produces no new and/or unexpected results and solves no stated problem. Furthermore, without the benefit of appellant's untimely submission of the publication, "Manufacturing Engineering and Technology," which is not incorporated by reference, the dictionary definition

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of braze is "To solder (two pieces of metal) together using a hard solder with a high melting point." Thus, Schade, Jr. teaches one of ordinary skill in the art to solder/braze the cooling coil to the heat generating device 10 of improved mechanical fastening and thermal conductivity.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



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Primary Examiner
Art Unit 3743

June 15, 2003

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